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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,399	11/25/2003	Francois Baccelli	YOR920030277US1 (8728-634)	8078
46069 7590 06/28/2007 F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797				
EXAMINER BOKHARI, SYED M				
ART UNIT 2609		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/721,399

Applicant(s)

BACCELLI ET AL.

Examiner

Syed Bokhari

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,12 and 13 is/are rejected.
- 7) ☒ Claim(s) 3-11 and 14-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 04/05/2004
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne (US 2003/0088696) in view of Yang-hua Chu et al. (research paper with title "Enabling Conference Applications on the Internet using an Overlay Multicast Architecture").

For claim 1, McCanne discloses a computer implemented method for group communication over a network of processors comprising (see paragraph 0012 line 1-10 in Summary of the Invention); determining an overlay spanning tree comprising an origin node and at least one receiving node (see paragraph 0045 lines 1-5 on page 3 in Summary of the Invention). McCanne discloses all the subject matter of the claimed invention with the exception of controlling a source communication rate to be less than or equal to a bottleneck rate of the overlay spanning tree.

Yang-hua Chu et al. in the same or similar field of endeavor teaches of controlling a source communication rate to be less than or equal to a bottleneck rate of the overlay spanning tree (see first column lines 27-39 on page 57 in Conference Applications and Overlay Design). It would have been obvious to one of ordinary skill in the art at the time of invention was made to use the same self-organizing protocols techniques that support conference applications for controlling a source communication rate to be less than or equal to a bottleneck rate of the overlay spanning tree as taught by Yang-hua Chu in the Overlay network of McCanne. The self-organizing protocols techniques incorporated in a protocol Narada supports conference applications for controlling a source communication

rate can be modified/implemented in the overlay network of McCanne by installing the protocol Narada on overlay nodes. The idea of conference applications technique was incorporated in Narada that considers bandwidth and latency explicitly but priorities bandwidth over latency. The motivation for installing the conference application protocol on overlay nodes is for controlling a source communication rate to be less than or equal to a bottleneck rate of the overlay spanning tree.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne (US 2003/0088696) in view of Yang-hua Chu et al. (research paper with title "Enabling Conference Applications on the Internet using an Overlay Multicast Architecture") as applied to claim 1 above, and further in view of Haas et al. (USP 7,035,937 B2).

For claim 2, Haas et al. discloses further comprising protecting data delivery by link error recovery (see column 5 lines 20-31 in Detailed Description of the Referred Embodiments). It would have been obvious to one of ordinary skill in the art at the time of invention was made to use the same algorithms designed to compute alternate multicast trees or links to minimize communication interruption as taught by Haas et al. in the combined overlay network of McCanne and Yang-hua Chu. The algorithms that calculates backup trees and links on continuous basis as taught by Haas et al. can be modified/implemented in the combined overlay network of McCanne and Haas et al. by installing this program on

the processor of each overlay nodes in the network for continuous computing of alternate trees and links. The program is based on the algorithms that continuously compute the alternate trees and links to replace the failed links in the multicasting network as soon as they occur.

The motivation of employing the programming on each overlay node is to avoid interruption in the data delivery by using backup or alternate trees and links readily available immediate replacement of the failing ones.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne (US 2003/0088696) in view of Liu et al. (US 2005/0068954 A1).

McCanne discloses a computer implemented method for group communication over a network of processors comprising (see paragraph 0012 line 1-10 in Summary of the Invention); determining an overlay spanning tree comprising an origin node and at least one receiving node (see paragraph 0045 lines 1-5 on page 3 in Summary of the Invention).

McCanne discloses all the subject matter of the claimed invention with the exception of a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for group communication over a network of processors. Liu et al. in the same or similar field of endeavor teaches a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for group communication over a network of processors (see

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paragraph 0048 lines 16-19 and paragraph 0049 lines 1-3 on page 5 in Detailed Description of Preferred Embodiments of the Invention). It would have been obvious to one of ordinary skill in the art at the time of invention was made to use the same steps with the program storage device readable by machine, tangibly embodying a program of instructions as taught by Liu et al. in place of the overlay routers of overlay network of McCanne. The program storage device readable by machine, embodying a program of instructions (router or node) will perform application-level multicast network with overlay routing as taught by Liu et al. can be modified/implemented in the overlay network of McCanne by replacing the overlay computers with the routers. The program storage device readable by machine, embodying a program of instructions will associate routers on the overlay network for group communication, and will route the information to the routers associated with overlay group. The motivation for using the program storage device readable by machine, tangibly embodying a program of instructions is for the steps to establish group communication with associated routers on overlay network.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCanne (US 2003/0088696) in view of Liu et al. (US 2005/0068954 A1) as applied to claim 12 above, and further in view of Haas et al. (USP 7,035,937 B2).

For claim 2, Haas et al. discloses further comprising protecting data delivery by link error recovery (see column 5 lines 20-31 in Detailed

Description of the Referred Embodiments). It would have been obvious to one of ordinary skill in the art at the time of invention was made to use the same algorithms designed to compute alternate multicast trees or links to minimize communication interruption as taught by Haas et al. in the combined overlay network of McCanne and Liu et al. The algorithms that calculates backup trees and links on continuous basis as taught by Haas et al. can be modified/implemented in the combined overlay network of McCanne and Liu et al. by installing this program on the processor of each overlay nodes in the network for continuous computing of alternate trees and links. The program is based on the algorithms that continuously compute the alternate trees and links to replace the failed links in the multicasting network as soon as they occur. The motivation of employing the programming on each overlay node is to avoid interruption in the data delivery by using backup or alternate trees and links readily available immediate replacement of the failing ones.

Allowable Subject Matter

8. Claims 3-11 and 14-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2005/0086469 A1 (Dunagan et al.), US 2005/0114472 A1 (Tan), US 2004/0054807 A1 (Harvey et al.), US 2003/0147386 A1 (Zhang et al.) and US 2005/0080894 A1 (Apostolopoulos et al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Bokhari whose telephone number is (571) 270-3115. The examiner can normally be reached on Monday through Friday from 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DANG T. TON
SUPERVISORY PATENT EXAMINER